

## PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF VIDEO DETECTION CAMERAS, NON-INVASIVE MICROLOOP PROBES, LIGHTING ARMS WITH 250W HPS LUMINAIRES, LED SIGNAL HEADS AND SIGNS TO MODIFY THE LEFT TURNS FOR MD 150 EASTBOUND AND WESTBOUND FROM EXCLUSIVE-PERMISSIVE PHASING TO EXCLUSIVE PHASING WITH FLASHING RED ARROW OPERATION AT THE INTERSECTION OF MD 150 (EASTERN BOULEVARD) AT KINGSTON ROAD / OLD EASTERN AVENUE.

MD 150 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

## INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE FULL-TRAFFIC-ACTUATED MODE WITH AN ALTERNATE PEDESTRIAN PHASE FOR THE WEST LEG OF THE INTERSECTION. THE MD 150 EASTBOUND AND WESTBOUND LEFT TURNS WILL OPERATE IN EXCLUSIVE PHASING WITH FLASHING RED ARROW OPERATION AT TIMES TO BE DETERMINED BY SHA. A PRE-EMPTION PHASE IS PROVIDED FOR MD 150 WESTBOUND.

## CONTROLLER REQUIREMENTS

THE EXISTING FULL-TRAFFIC-ACTUATED EIGHT-PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL REMAIN. THE EXISTING VIDEO DETECTION INTERFACE EQUIPMENT SHALL BE REMOVED BY SHA. IP-BASED VIDEO DETECTION INTERFACE EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY SHA.

## WIRING KEY

A,B	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
C,D,E	NON-INVASIVE MICROLOOP PROBE SET WITH 500 FT. LEAD-IN CABLE
F,G,H	NON-INVASIVE MICROLOOP PROBE SET WITH 1000 FT. LEAD-IN CABLE
I,J,K,L	IP-BASED VIDEO DETECTION CAMERA CABLE
M,N	3-CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TYPE TC
EX	USE EXISTING CABLES
PF	EXISTING OVERHEAD POWER FEED
⊕	EXISTING GROUND ROD

## EQUIPMENT LIST "A, B &amp; C"

## A. EQUIPMENT TO BE SUPPLIED BY SHA.

ITEM NO.	DESCRIPTION
9086	IP-BASED VIDEO DETECTION INTERFACE EQUIPMENT (1-4 CAMERAS)
9571	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN 2 EACH - R10-12(2) 48"x36"

## B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION
1001	MAINTENANCE OF TRAFFIC
2002	TEST PIT EXCAVATION
6002	5 INCH CONCRETE SIDEWALK
8001	12 INCH LED SIGNAL HEAD SECTION
8007	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP AND LUMINAIRE
8023	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000'
8024	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8029	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8034	DISCONNECT, PULL-BACK & REROUTE CABLES
8038	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED
8040	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8042	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8043	REMOVE & RESET DECORATIVE BRICK SIDEWALK
8048	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8058	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8064	ELECTRICAL CABLE - 3-CONDUCTOR NO. 12 AWG (B,W,G) TYPE T/C

## C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

VIDEO DETECTION CAMERA AND VIDEO DETECTION INTERFACE EQUIPMENT SHALL BE DELIVERED TO SHA. ALL OTHER MATERIALS TO BE REMOVED SHALL BECOME PROPERTY OF THE CONTRACTOR.

## PHASING CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	←G→	←G→	R	R	←G→	←G→	R	R	R	R	R	R	R	DW	DW
PHASE 1 AND 5	←G→	←G→	R	R	←G→	←G→	R	R	R	R	R	R	R	DW	DW
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6															
PHASE 1 AND 6	←G→	←G→	G	G	←R→	←R→	R	R	R	R	R	R	R	DW	DW
1 AND 6 CHANGE	←Y→	←Y→	G	G	←R→	←R→	R	R	R	R	R	R	R	DW	DW
PHASE 2 AND 5	←R→	←R→	R	R	←G→	←G→	G	G	R	R	R	R	R	DW	DW
2 AND 5 CHANGE	←R→	←R→	R	R	←Y→	←Y→	G	G	R	R	R	R	R	DW	DW
PHASE 2 AND 6	←R→	←R→	G	G	←R→	←R→	G	G	R	R	R	R	R	DW	DW
2 AND 6 CHANGE	←R→	←R→	Y	Y	←R→	←R→	Y	Y	R	R	R	R	R	DW	DW
PHASE 2 AND 6 ALT	FL	FL	←G→	G	FL	FL	G	G	R	R	R	R	R	DW	DW
PHASE 2 AND 6 ALT CHANGE	←R→	←R→	Y	Y	←R→	←R→	Y	Y	R	R	R	R	R	DW	DW
PHASE 4 AND 8	←R→	←R→	R	R	←R→	←R→	R	R	G	G	G	G	G	DW	DW
4 AND 8 CHANGE	←R→	←R→	R	R	←R→	←R→	R	R	Y	Y	Y	Y	Y	DW	DW
PHASE 4 ALT AND 8	←R→	←R→	R	R	←R→	←R→	R	R	G	G	G	G	G	WK	WK
PED CLEARANCE	←R→	←R→	R	R	←R→	←R→	R	R	G	G	G	G	G	FL/DW	FL/DW
4 ALT AND 8 CHANGE	←R→	←R→	R	R	←R→	←R→	R	R	Y	Y	Y	Y	Y	DW	DW
PRE-EMPTION	←R→	←R→	R	R	←G→	←G→	G	G	R	R	R	R	R	DW	DW
PRE-EMPTION CHANGE	←R→	←R→	R	R	←Y→	←Y→	Y	Y	R	R	R	R	R	DW	DW
FLASHING OPERATION	FL	FL	FL/Y	FL/Y	FL	FL	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK

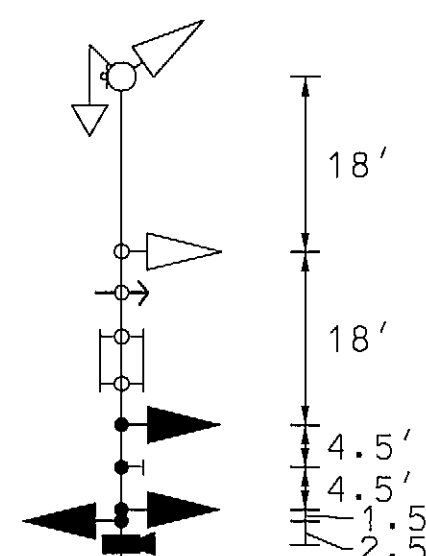
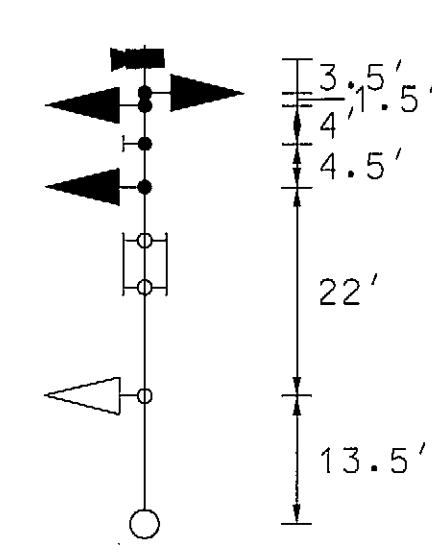
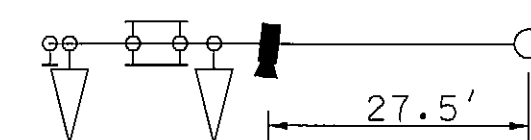
## SPECIAL NOTE:

PHASE 2 AND 6 ALT INCLUDE OPERATION OF MD 150 EASTBOUND AND WESTBOUND PERMISSIVE LEFT TURNS USING FLASHING RED ARROW OPERATION. TIME OF DAY OPERATION SHALL BE AS DIRECTED BY SHA.

## GENERAL NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE.
- ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
- UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "MISS UTILITY" PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
- THE EXISTING VIDEO DETECTION CAMERA AND VIDEO DETECTION INTERFACE EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND RETURNED TO SHA.
- ALL PROPOSED LUMINAIRES SHALL BE EQUIPPED WITH PHOTOCELLS.

TOD NO: XY125-05  
SHA NO: BA087B53  
MD 150; Kingston Rd/Old Eastern Avenue

EQUIPMENT DIMENSIONS  
NORTHWEST CORNEREQUIPMENT DIMENSIONS  
SOUTHEAST CORNEREQUIPMENT DIMENSIONS  
NORTHEAST CORNER

## CONTACT PERSONS FOR DISTRICT #4 ARE AS FOLLOWS:

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MR. DONALD SCHAEFER  
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION  
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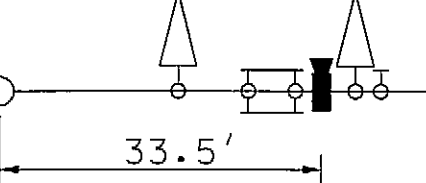
## CONTACT PERSONS FOR OOTS ARE AS FOLLOWS:

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EQUIPMENT DIMENSIONS  
SOUTHWEST CORNER

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www.rkk.com

Engineers Construction Managers Planners Scientists

<b>SHA</b> STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION MD 150 (EASTERN BLVD) AT KINGSTON RD / OLD EASTERN AVE MIDDLE RIVER, MD	
GENERAL INFORMATION SHEET	
SCALE <u>NONE</u>	DATE <u>MARCH 2012</u> CONTRACT NO. <u>XY1255185</u>
DESIGNED BY <u>WFW (RK&amp;K)</u>	COUNTY <u>BALTIMORE</u>
DRAWN BY <u>WFW (RK&amp;K)</u>	LOGMILE <u>03015005.65</u>
CHECKED BY <u>BJG (RK&amp;K)</u>	TMS NO. <u>L275</u>
FAP NO. <u></u>	TOD NO. <u></u>
TS NO. 1680F-G1	DRAWING SP-2 OF 2
SHEET NO. 2 OF 2	